#### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Original) Use of a therapeutically effective amount of a compound of formula I:

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino:

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0-2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

to inhibit neoplastic cell growth or proliferation in a mammal.

2. (Original) Use of a therapeutically effective amount of a compound of formula I:

4

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

in the treatment of cancer in a mammal in need thereof.

 (Original) The use according to claim 1 or 2, wherein said compound is selected from the group of compounds of structural formulae:

or a salt thereof, wherein:

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached form aryl or substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or –S(O)<sub>0-2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl; and

R10 is H, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl, - CH<sub>2</sub>-aryl, or -CH<sub>2</sub>-heteroaryl.

4. (Original) The use according to claim 1 or 2, wherein said compound has formula

or a salt thereof, wherein:

Ph1 and Ph2 are independently selected from phenyl and substituted phenyl;

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or – S(O)<sub>0-2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl; R10 is H, alkyl, substituted alkyl, alkenyl, substituted alkyn, l, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or acyl.

 (Original) The use according to claim 1 or 2, wherein said compound is selected from the group of compounds of structural formulae:

or a salt thereof, wherein:

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or  $-S(O)_{0.2}R$  wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl:

x is CR11 or N; v is CR12 or N;

z is CR13 or N;

r is CR14 or N:

x' is CR15 or N:

X IS CRID OF IN,

y' is CR16 or N;

z' is CR17 or N;

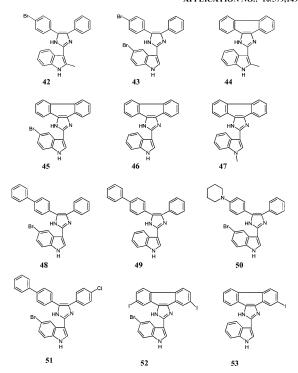
r' is CR18 or N;

R10 is H, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl.

R11, R12, R13, R14, R15, R16, R17 and R18 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, or cyano.

6. (Original) The use according to claim 1 or 2, wherein said compound is selected from the group of compounds:

9



154

789380 23

789380 26

- (Original) The use according to claim 1, wherein said neoplastic cell growth is associated with a solid tumour.
- 8. (Original) The use according to claim 2, wherein said cancer is solid tumour.
- (Original) The use according to claim 1, wherein said neoplastic cell growth is
  associated with a cancer selected from the group of: breast cancer, central nervous
  system cancer, cervical cancer, colon cancer, liver cancer, lung cancer, melanoma,
  ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, and leukemia.
- 10. (Original) The use according to claim 2, wherein said cancer is selected from the group of: breast cancer, central nervous system cancer, cervical cancer, colon cancer, liver cancer, lung cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, and leukemia.

- (Original) The use according to any one of claims 1 to 10, wherein said compound is formulated for administration in combination with one or more anticancer agents(s).
- (Original) The use according to any one of claims 1 to 11, wherein said compound is formulated for systemic administration.
- 13. (Original) A compound selected from the compounds of structural formulae:

wherein:

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form a aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro,

cyano or  $-S(O)_{0.2}R$  wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

#### 14. (Original) A compound selected from the compounds of structural formulae:

$$Z' = Z'$$
 $Z' = Z'$ 
 $Z' =$ 

or a salt thereof, wherein:

R4, R5, R6, R7, R8 and R9 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0-2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

x is CR11 or N;

v is CR12 or N;

z is CR13 or N;

r is CR14 or N;

x' is CR15 or N:

y' is CR16 or N;

z' is CR17 or N;

r' is CR18 or N;

R11, R12, R13, R14, R15, R16, R17 and R18 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkylalkenyl, alkylalkenyl, alkylalkenyl, alkylalkenyl, heterocycle, heteroaryl, substituted heterocycle, heteroaryl, substituted eterocycle, he

#### 15. (Original) Use of a compound of formula I:

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

in the manufacture of a medicament for the inhibition of neoplastic cell growth or proliferation.

16. (Original) Use of a compound of formula I:

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino:

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl,

in the maunfacture of a medicament for the treatment of cancer

 (Original) An anti-cancer composition comprising a carrier, diluent or excipient and an effective amount of a compound of formula I:

or a salt thereof.

wherein:

R1 is aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl or amino;

R2 and R3 are independently aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl or R2 and R3 when taken together along with the carbon atoms they are attached to, form aryl or substituted aryl, and

R4 is hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano or -S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

18. (Previously Presented) A compound selected from the compounds of structural formulae:

126

153 154

177

250

19. (Previously Presented) The compound according to claim 18, wherein said compound is:

 (Previously Presented) A pharmaceutical composition comprising the compound according to any one of claims 13, 14, 18 or 19, and a pharmaceutically acceptable carrier.

#### 21. (New) A compound of formula (VI):

or a salt thereof, wherein:

R4, R5, R7 and R8 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano, —CONHNH2 or —S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl;

R6 is hydrogen, halogen, CN, NO<sub>2</sub>, NH<sub>2</sub>, or -OR, wherein R is C1-C10 alkyl or arylalkyl:

R9 is hydrogen, C1-C10 alkyl, aryl, or halogen;

x is CR11 or N;

v is CR12 or N:

z is CR13 or N:

r is CR14 or N:

x' is CR15 or N;

y' is CR16 or N;

z' is CR17 or N;

r' is CR18 or N:

R10 is H, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkenyl, lower alkynyl, substituted lower alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, acyl or -SO<sub>2</sub>PhCH<sub>3</sub>, and

R11, R12, R13, R14, R15, R16, R17 and R18 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, lower alkenyl, substituted lower alkynyl, alkylalkenyl, alkyl alkynyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, heteroalkyl, cycloalkyl, substituted cycloalkyl, alkylcycloalkyl, alkylcycloheteroalkyl, nitro, cyano, -N=CRR', wherein R and R' are independently selected from H, alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, substituted heterocycle, heteroaryl, substituted heteroaryl; or -NHC(S)NH-phenyl (substituted or unsubstituted).

### 22. (New) The compound according to claim 21, wherein:

R4, R5, R7 and R8 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, nitro, cyano, -CONHNH2 or -S(O)<sub>0-2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

23. (New) The compound according to claim 21, wherein:

```
x is CR11:
```

v is CR12:

z is CR13;

r is CR14;

x' is CR15:

v' is CR16:

z' is CR17; and

r' is CR18

- 24. (New) The compound according to claim 21, wherein:
  - x is CR11 or N;
  - y is CR12;
  - z is CR13;
  - r is CR14 or N:
  - x' is CR15 or N:
  - y' is CR16;
  - z' is CR17; and
  - r' is CR18 or N.
- 25. (New) The compound according to claim 21, wherein:
  - x is CR11;
  - y is CR12;
  - z is CR13;
  - r is CR14 or N;
  - x' is CR15:
  - y' is CR16;
  - , ... -----,
  - z' is CR17; and
  - r' is CR18 or N.
- 26. (New) The compound according to claim 21, selected from:

117

178

177

789380 62

190

189

789380 63

214

- (New) A pharmaceutical composition comprising the compound of claim 21 and a pharmaceutically acceptable carrier.
- (New) A method of treating cancer in a mammal, comprising administering to said mammal an effective amount of a compound of claim 21 or a pharmacologically acceptable salt thereof.
- (New) The method of claim 28, wherein said cancer is a solid tumor.
- 30. (New) The method of claim 28, wherein said cancer is selected from the group of: breast cancer, central nervous system cancer, cervical cancer, colon cancer, liver cancer, lung cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, and leukemia.

- (New) The method of claim 28, wherein said compound is administered in combination with an anti-cancer agent.
- 32. (New) The method of claim 28, wherein said mammal is a human.
- 33. (New) The method of claim 28, wherein in the compound of formula VI:

R4, R5, R7 and R8 are independently selected from hydrogen, halogen, hydroxyl, thiol, lower alkyl, substituted lower alkyl, alkoxy, alkylthio, acyl, aryloxy, amino, amido, carboxyl, aryl, substituted aryl, nitro, cyano, -CONHNH2 or -S(O)<sub>0.2</sub>R wherein R is alkyl, substituted alkyl, aryl, substituted aryl, heterocycle, heteroaryl, substituted heterocycle, or substituted heteroaryl.

34. (New) The method of claim 28, wherein in the compound of formula VI:

```
x is CR11;
```

y is CR12;

z is CR13;

r is CR14:

x' is CR15;

y' is CR16;

z' is CR17; and

r' is CR18.

35. (New) The method of claim 28, wherein in the compound of formula VI:

x is CR11 or N;

y is CR12;

z is CR13;

r is CR14 or N:

x' is CR15 or N:

v' is CR16;

z' is CR17; and

r' is CR18 or N.

- 36. (New) The method of claim 28, wherein in the compound of formula VI:
  - x is CR11;
  - y is CR12;
  - z is CR13;
  - r is CR14 or N;
  - x' is CR15;
  - y' is CR16;
  - z' is CR17; and
  - r' is CR18 or N.
- 37. (New) The method of claim 28, wherein in the compound is selected from:

117

Br NO<sub>2</sub> NO<sub>2</sub> NO<sub>2</sub> NO<sub>2</sub> NO<sub>2</sub> NO<sub>3</sub> NO<sub>4</sub> NO<sub>5</sub> NO<sub>5</sub> NO<sub>5</sub> NO<sub>6</sub> NO<sub>7</sub> NO<sub></sub>

178

177

789380 78

214

38. (New) The method of claim 28, wherein said compound is: